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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,451	11/12/2003	Dale Wolin	10012464-4	9435

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P. O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

LUK, LAWRENCE W

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/712,451	<b>Applicant(s)</b> WOLIN ET AL.	
	<b>Examiner</b> Lawrence W Luk	<b>Art Unit</b> 2838	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6,8-15,17-23,25-31 and 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-12,14,15,17-23,25-31 and 33 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/1704;4/5/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

***Election/Restrictions***

1. A response on 7-6-2004 a provisional election was made without traverse to prosecute the invention of claims 1-6, 8-15, 17-23, 25-31 and 33.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5, 6, 8-11, 17-20, 22, 23, 25-28 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Bourbeau (5,666,040).

As to claims 1 and 18, Bourbeau disclose in figure 1, column 2, line 60 to column 3, line 17, an apparatus for charging a battery (unit 10) comprising a charging circuit (unit 22) for providing a charging current to the battery; a temperature sensor (unit 34) positioned to sense a temperature of said battery (unit 10); and a controller (unit 28) coupled to said temperature sensor (unit 10) and said charging circuit and operable to control said charging circuit in accordance with said temperature, said controller being operable to minimize said charging current when said temperature is higher than a second predetermined threshold value (abstract).

As to claims 2 and 19, Bourbeau disclose in figure 1, column 13, lines 36-38, said controller continuously sets said charging current in accordance with said temperature.

As to claims 3 and 20, Bourbeau disclose in figure 3, column 3, lines 7-12, said controller periodically sets said charging current in accordance with said temperature.

As to claims 5 and 22, Bourbeau disclose in column 13, lines 6-9, said controller is operable to set said charging current to a maximum value when said temperature is lower than a first predetermined threshold value.

As to claims 6 and 23, Bourbeau disclose in column 13, line 56 to column 14, line 17, said maximum value is the battery's maximum specified charging current, and said first predetermined threshold value is the battery's maximum charging temperature.

As to claims 8, 25 and 33, Bourbeau disclose in figure 1, column 13, lines 36-38, the battery (unit 10) is coupled to a load, and wherein said temperature sensor (unit 34) senses that temperature of the battery (unit 10) and the load.

As to claims 9 and 26, Bourbeau disclose in figure 1, column 2, line 60 to column 3, line 17, an apparatus for exercising a battery, comprising a charging circuit having a charging current. output coupled to the battery (unit 10); a temperature sensor (unit 34) positioned to sense a temperature related to the battery temperature; a discharging circuit (unit 20) having a discharging current input coupled to the battery; and a controller (unit 28) coupled to said temperature sensor (unit 34), said charging circuit (unit 14), and said discharging circuit (unit 20), said controller operable to set said charging current in accordance with said temperature, and operable to set said

Art Unit: 2838

discharging current in accordance with said temperature, said controller being operable to set minimize said charging current when said temperature is higher than a second predetermined threshold value (abstract).

As to claims 10 and 27, Bourbeau disclose in figure 1, column 13, lines 65 to column 14, line 16, said controller continuously sets said discharging current (unit 20) in accordance with said temperature.

As to claims 11 and 28, Bourbeau disclose in figure 3, column 3, lines 7-12, said controller periodically sets said discharging current (unit 20) in accordance with said temperature.

As to claim 17, Bourbeau disclose in figure 1, said temperature sensor (unit 34) senses the temperature of the battery and said discharging circuit (unit 20).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 12, 14, 21 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bourbeau (5,666,040) in combination with Seyfang (4,949,046).

As to claims 4, 12, 21 and 29, Bourbeau disclose the elements as claims, except for the look up table to set said charging current and discharging.

Seyfang disclose in column 4, lines 49-60, a memory coupled to said controller having a temperature and charging current look up table stored therein, and wherein said controller accesses said look up table to set said charging and discharging current .

It would have been obvious to person having ordinary skill in the art at the time of the invention was made to modify the device of Bourbeau to include the look up table to set said charging and discharging current as taught by Seyfang for monitoring the battery temperature and charge to a battery in a short time without overheating.

As to claims 14, 30 and 31, Bourbeau in view of Seyfang are applied supra, and Seyfang further disclose in column 2, lines 40-60, said controller is operable to set said discharging current to a maximum value when said temperature is lower than a first predetermined threshold value.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bourbeau (5,666,040) in combination with Hoffman, Jr. et al. (5,828,201).

As to claims 15, Bourbeau disclose the elements as claims, except for the maximum value is the battery's maximum specified discharging current and said first predetermined threshold value is the battery's maximum discharging temperature.

Hoffman, Jr. et al. disclose in column 10, lines 19-62, for the maximum value is the battery's maximum specified discharging current and said first predetermined threshold value is the battery's maximum discharging temperature.

It would have been obvious to person having ordinary skill in the art at the time of the invention was made to modify the device of Bourbeau to include the maximum value is the battery's maximum specified discharging current and said first predetermined threshold value is the battery's maximum discharging temperature as taught by Hoffman, Jr. et al. for a discharge list ranking the voltages from maximum to minimum.

### ***Allowable Subject Matter***

8. Claim 13 is objected to as being dependent upon a rejected base claim. The prior art of record fails to teach or reasonably suggest that said discharging circuit comprises a variable impedance load and wherein said look up table values correspond to values of said variable impedance load.. Claim 13 would be allowable if rewritten in if rewritten in independent from including all of the limitations of the base claim.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence W Luk whose telephone number is (571)272-2080. The examiner can normally be reached on 7 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571)272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 2838

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LWL

July 23, 2004

*Lawrence Luk*  
*examiner*  
*7/23/04*